

### Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 07/05/2022

Reviewed on 07/05/2022

## 1 Identification

- **Product identifier**
- **Trade name: Tannin Reagent 2**
- **Catalogue number:** 56Z746598, 56L7465, 56L746530, 56U746530, SDT249
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**  
Tintometer Inc.  
6456 Parkland Drive  
Sarasota, FL 34243  
USA  
phone: (941) 756-6410  
fax: (941) 727-9654  
www.lovibond.us  
Made in Germany
- **Emergency telephone number:** + 1 866 928 0789 (English, French, Spanish)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Corrosive to Metals 1 H290 May be corrosive to metals.



GHS07

Skin Irritation 2 H315 Causes skin irritation.  
Eye Irritation 2A H319 Causes serious eye irritation.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Hazard Communication Standard (HCS).
- **Hazard pictograms**



GHS05

- **Signal word** Warning
- **Hazard-determining components of labeling:**  
Lithium sulphate monohydrate  
Sodium wolframate dihydrate
- **Hazard statements**  
H290 May be corrosive to metals.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.
- **Precautionary statements**  
P280 Wear protective gloves/protective clothing/eye protection.  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P302+P352 If on skin: Wash with plenty of water.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P390 Absorb spillage to prevent material damage.

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· **Other hazards** No further relevant information available.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** aqueous solution
- **Composition and Information on Ingredients:**  
Percent ranges are used due to the confidential product information.

|  |   |        |
|--|---|--------|
| CAS: 10102-25-7<br>EINECS: 233-820-4   | Lithium sulphate monohydrate<br>⚠ Acute Toxicity - Oral 4, H302   | 10-15% |
| CAS: 7664-38-2<br>EINECS: 231-633-2<br>Index number: 015-011-00-6<br>RTECS: TB 6300000 | phosphoric acid<br>⚠ Corrosive to Metals 1, H290; Skin Corrosion 1B, H314; ⚠ Acute Toxicity - Oral 4, H302                              | 5-10%  |
| CAS: 10213-10-2<br>EINECS: 236-743-4<br>RTECS: YO7900000                               | Sodium wolframate dihydrate<br>⚠ Acute Toxicity - Oral 4, H302  | 5-10%  |
| CAS: 7647-01-0<br>EINECS: 231-595-7<br>Index number: 017-002-01-X<br>RTECS: MW 9620000 | hydrochloric acid<br>⚠ Corrosive to Metals 1, H290; Skin Corrosion 1B, H314; ⚠ Specific Target Organ Toxicity - Single Exposure 3, H335 | 3-5%   |
| CAS: 7726-95-6<br>EINECS: 231-778-1<br>Index number: 035-001-00-5<br>RTECS: EF 9100000 | bromine<br>⚠ Acute Toxicity - Inhalation 2, H330; ⚠ Skin Corrosion 1A, H314; ⚠ Aquatic Acute 1, H400 (M=1)                              | <1%    |

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air. Call a doctor.
- **After skin contact:**  
Immediately rinse with plenty of water.  
If skin irritation or rash occurs: Get medical advice/attention.
- **After eye contact:** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult a doctor.
- **After swallowing:**  
Rinse out mouth and then drink 1-2 glasses of water.  
Do not induce vomiting.  
Seek medical treatment.
- **Most important symptoms and effects, both acute and delayed**  
irritations  
after inhalation:  
mucosal irritations, cough, breathing difficulty  
Possible damages: damage of respiratory tract  
after swallowing:  
sickness  
vomiting  
diarrhoea
- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**  
The product is not combustible.  
During heating or in case of fire poisonous gases are produced.  
In case of fire, the following can be released:  
Sulfur oxides (SOx)

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Phosphorus oxides (PxOx)

Hydrogen chloride (HCl)

LiOx

Sodium oxide

· **Advice for firefighters**· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

· **Additional information**

Collect contaminated fire fighting water separately. It must not enter the sewage system.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Ambient fire may liberate hazardous vapours.

## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**· **Advice for non-emergency personnel:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

· **Advice for emergency responders:** Protective equipment: see section 8· **Environmental precautions:** Do not allow product to reach sewage system or any water course.· **Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

Absorb with liquid-binding material (sand, diatomite, universal binders).

Dispose contaminated material as waste according to item 13.

· **Reference to other sections**

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

· **Precautions for safe handling**· **Advice on safe handling:** Ensure good ventilation/exhaustion at the workplace.· **Hygiene measures:**

Do not inhale dust / smoke / mist.

Avoid contact with the skin.

Avoid contact with the eyes.

Take off immediately all contaminated clothing.

Wash hands before breaks and at the end of work.

Do not eat, drink or smoke when using this product.

· **Conditions for safe storage, including any incompatibilities**· **Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Store only in the original receptacle.

· **Information about storage in one common storage facility:**

Store away from metals.

Do not store together with alkalis (caustic solutions).

· **Further information about storage conditions:**

Protect from heat and direct sunlight.

Protect from exposure to the light.

Protect from humidity and water.

· **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Control parameters**· **Components with limit values that require monitoring at the workplace:**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

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| CAS: 7664-38-2 phosphoric acid   |   |
|----------------------------------|---|
| PEL (USA)                        | Long-term value: 1 mg/m <sup>3</sup>  |
| REL (USA)                        | Short-term value: 3 mg/m <sup>3</sup><br>Long-term value: 1 mg/m <sup>3</sup>                       |
| TLV (USA)                        | Short-term value: 3 mg/m <sup>3</sup><br>Long-term value: 1 mg/m <sup>3</sup>                       |
| EL (Canada)                      | Short-term value: 3 mg/m <sup>3</sup><br>Long-term value: 1 mg/m <sup>3</sup>                       |
| EV (Canada)                      | Short-term value: 3 mg/m <sup>3</sup><br>Long-term value: 1 mg/m <sup>3</sup>                       |
| CAS: 7647-01-0 hydrochloric acid |   |
| PEL (USA)                        | Ceiling limit value: 7 mg/m <sup>3</sup> , 5 ppm  |
| REL (USA)                        | Ceiling limit value: 7 mg/m <sup>3</sup> , 5 ppm  |
| TLV (USA)                        | Ceiling limit value: 2 ppm<br>A4  |
| EL (Canada)                      | Ceiling limit value: 2 ppm  |
| EV (Canada)                      | Ceiling limit value: 2 ppm  |
| CAS: 7726-95-6 bromine           |   |
| PEL (USA)                        | Long-term value: 0.7 mg/m <sup>3</sup> , 0.1 ppm  |
| REL (USA)                        | Short-term value: 2 mg/m <sup>3</sup> , 0.3 ppm<br>Long-term value: 0.7 mg/m <sup>3</sup> , 0.1 ppm |
| TLV (USA)                        | Short-term value: 0.2 ppm<br>Long-term value: 0.1 ppm   |
| EL (Canada)                      | Short-term value: 0.2 ppm<br>Long-term value: 0.1 ppm   |
| EV (Canada)                      | Short-term value: 0.2 ppm<br>Long-term value: 0.1 ppm   |

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Engineering measures:**  
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.
- **Personal protective equipment:**  
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
- **Breathing equipment:** Use respiratory protective device against the effects of fume/dust/aerosol.
- **Recommended filter device for short term use:** Combination filter ABEK-P2
- **Protection of hands:**  
Protective gloves  
Preventive skin protection by use of skin-protecting agents is recommended.  
After use of gloves apply skin-cleaning agents and skin cosmetics.
- **Material of gloves**  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.11$  mm
- **Penetration time of glove material**  
Value for the permeation: Level  $\leq 1$  (10 min)  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**  
Safety glasses  
Use protective goggles that have been tested and approved in accordance with government standards (like NIOSH).
- **Body protection:** Protective work clothing
- **Limitation and supervision of exposure into the environment:**  
Do not allow product to reach sewage system or any water course.

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### 9 Physical and chemical properties

#### · Information on basic physical and chemical properties

##### · Appearance:

|  |   |
|--|---|
| · Form / Physical state:                   | Solution                                      |
| · Color:                                   | Yellow  |
| · Odor:                                    | Odorless                                      |
| · Odor threshold:                          | Not applicable.                               |
| · pH-value at 20°C (68°F):                 | < 1   |
|  | Strongly acidic                               |
| · Melting point/freezing point:            | Not determined.                               |
| · Initial boiling point and boiling range: | Not determined.                               |
| · Flash point:                             | Not applicable.                               |
| · Flammability (solid, gas):               | The product is not combustible.               |
| · Ignition temperature:                    | Not applicable.                               |
| · Decomposition temperature:               | Not determined.                               |
| · Auto-ignition temperature:               | Product is not self-igniting.                 |
| · Danger of explosion:                     | Product does not present an explosion hazard. |
| · Flammability or explosive limits:        |   |
| · Lower:                                   | Not applicable.                               |
| · Upper:                                   | Not applicable.                               |
| · Oxidizing properties:                    | none  |
| · Vapor Pressure:                          | Not determined.                               |
| · Density at 20°C (68°F):                  | 1.22 g/cm <sup>3</sup> (10.18 lbs/gal)        |
| · Relative density:                        | Not determined.                               |
| · Vapor density:                           | Not determined.                               |
| · Evaporation rate:                        | Not determined.                               |
| · Solubility(ies)                          |   |
| · Water:                                   | Fully miscible.                               |
| · Partition coefficient (n-octanol/water): | Not applicable (mixture).                     |
| · Viscosity:                               |   |
| · Kinematic:                               | Not determined.                               |
| · Other information                        |   |
| · Solids content:                          | 15 - 25 %                                     |
| · Solvent content:                         |   |
| · Organic solvents:                        | 0 %   |
| · Water:                                   | 60-80 %                                       |

### 10 Stability and reactivity

- **Reactivity** see section "Possibility of hazardous reactions"
- **Chemical stability** Stable at ambient temperature (room temperature).
- **Possibility of hazardous reactions**
  - Reacts with metals forming hydrogen (Danger of explosion in case of large amounts!)
  - Corrosive action on metals.
  - Reacts with alkali (lyes).
- **Conditions to avoid** Heating.
- **Incompatible materials:** metals
- **Hazardous decomposition products:** see section 5

### \* 11 Toxicological information

#### · Information on toxicological effects

- **Acute toxicity:** Based on available data, the classification criteria are not met.

#### · Acute toxicity estimate (ATE<sub>(mix)</sub>) - Calculation method:

|      |                          |                      |
|------|--------------------------|----------------------|
| Oral | GHS ATE <sub>(mix)</sub> | >2000–5000 mg/kg (.) |
|------|--------------------------|----------------------|

#### · LD/LC50 values that are relevant for classification:

**CAS: 10102-25-7 Lithium sulphate monohydrate**

|      |      |   |
|------|------|---|
| Oral | LD50 | 613 mg/kg (rat)<br>(RTECS, anhydrous substance) |
|------|------|---|

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| CAS: 7664-38-2 phosphoric acid              |         |  |
|---|---------|--|
| Oral  | LD50    | 1530 mg/kg (rat)<br>(RTECS)            |
| Dermal                                      | LD50    | 2740 mg/kg (rabbit)<br>(RTECS)         |
| Inhalative                                  | LC50    | >0.85 mg/l/1h (rat)<br>(RTECS)         |
| CAS: 10213-10-2 Sodium wolframate dihydrate |         |  |
| Oral  | LD50    | 1190 mg/kg (rat)                       |
| CAS: 7647-01-0 hydrochloric acid            |         |  |
| Inhalative                                  | LC50    | 3124 ppm / 1h (rat)<br>(RTECS,V, pure) |
| CAS: 7726-95-6 bromine                      |         |  |
| Oral  | LD50    | 2600 mg/kg (rat)<br>(RTECS)            |
|   | LDo     | >14 mg/kg (human)<br>(RTECS)           |
| Inhalative                                  | LC50/4h | 0.5 mg/l (ATE)                         |

· **Primary irritant effect:**

- **on the skin:** Causes skin irritation.
- **on the eye:** Causes serious eye irritation.

· **Information on components:**

| CAS: 7647-01-0 hydrochloric acid |          |                 |
|----------------------------------|----------|-----------------|
| Irritation of skin               | OECD 404 | (rabbit: burns) |
| Irritation of eyes               | OECD 405 | (rabbit: burns) |

- **Sensitization:** Based on available data, the classification criteria are not met.

· **Information on components:**

| CAS: 7664-38-2 phosphoric acid   |                    |   |
|----------------------------------|--------------------|---|
| Sensitization                    | Patch test (human) | (negative)<br>(IUCLID)                                  |
| CAS: 7647-01-0 hydrochloric acid |                    |   |
| Sensitization                    | OECD 406           | (negative) (EPA OPP 81-6: Guinea pig maximisation test) |

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

|                |                   |   |
|----------------|-------------------|---|
| CAS: 7647-01-0 | hydrochloric acid | 3 |
|----------------|-------------------|---|

· **NTP (National Toxicology Program)**

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

· **OSHA-Ca (Occupational Safety & Health Administration)**

|                                    |
|------------------------------------|
| None of the ingredients is listed. |
|------------------------------------|

- **Other information:** see section 8 / 15

· **Synergistic Products:** None

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):** The following statements refer to the mixture:

- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

· **Information on components:**

| CAS: 7664-38-2 phosphoric acid |  |  |
|--------------------------------|--|--|
| OECD 471                       | (negative) (Bacterial Reverse Mutation Test - Ames test)<br>(IUCLID) |  |

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· **Additional toxicological information:**

The following applies to lithium compounds in general:

after absorption: CNS disorders, ataxia (impaired locomotor coordination) due to disturbed electrolyte balance

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach

**CAS: 7664-38-2 phosphoric acid**

(source: GESTIS)

Main toxic effects:

Acute: Irritant to corrosive effect on the eyes, respiratory tract and skin, damage to the gastrointestinal tract after ingestion

chronic: Irritant effect on the respiratory tract

**CAS: 7647-01-0 hydrochloric acid**

(source: GESTIS)

Main toxic effects

Acute: Irritation and corrosion to the eyes, airways and skin, danger of severe damage to the eyes and lungs,

following ingestion, concentration-dependent damage to the gastrointestinal tract

Chronic: Airway diseases, damage to the teeth, gastrointestinal disorders

Further Information:

The acute action of hydrochloric acid is based on the locally damaging effects on contacted tissues which are primarily dependent on the concentration. Following repeated contact with the skin, even diluted hydrochloric acid can cause skin damage (reddening, drying, fissures, dermatitis). The critical effect following repeated inhalative exposure is irritation to the respiratory tract.

· **Other information** Other dangerous properties can not be excluded.

## 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

**CAS: 7664-38-2 phosphoric acid**

EC50 100 mg/l/48h (Daphnia magna) (OECD 202)

EC50 100 mg/l/72h (Desmodesmus subspicatus) (OECD 201)

LC50 138 mg/l/96h (mosquitofish)

**CAS: 10213-10-2 Sodium wolframate dihydrate**

EC50 89.4 mg/l/48h (Daphnia magna)  
(ECOTOX)

**CAS: 7647-01-0 hydrochloric acid**

EC50 20.5 mg/l/96h (bluegill) (OECD 203)  
(Merck)

· **Bacterial toxicity:**

**CAS: 7664-38-2 phosphoric acid**

EC50 >1000 mg/l /3h (activated sludge) (OECD 209)

· **Other information:**

The following applies for lithium compounds in general:

fish toxic from 100 mg/l, Daphnia toxic from 16 mg/l, plants toxic from 0,2 mg/l

Toxic for fish:

HCl > 25 mg/l

· **Persistence and degradability** No further relevant information available.

· **Bioaccumulative potential**

Pow = n-octanol/wasser partition coefficient

log Pow < 1 = Does not accumulate in organisms.

log Pow 1-3 = Not worth-mentioning accumulating in organisms.

**CAS: 7664-38-2 phosphoric acid**

log Pow -0.77 (.) (calculated)

**CAS: 7726-95-6 bromine**

log Pow 1.03 (.) (calculated)

· **Mobility in soil** No further relevant information available.

· **Other adverse effects**

Depending on the concentration, phosphorus and/or nitrogen compounds may contribute to the eutrophication of water supplies.

Forms corrosive mixtures with water even if diluted.

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Harmful effect due to pH shift.  
Avoid transfer into the environment.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

|  |  |
|--|--|
| · <b>UN-Number</b><br>· <b>DOT, IMDG, IATA</b>   | UN3264   |
| · <b>UN proper shipping name</b><br>· <b>DOT</b><br>· <b>IMDG, IATA</b>  | Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid, Phosphoric acid solution)<br>CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.<br>(HYDROCHLORIC ACID, PHOSPHORIC ACID, SOLUTION) |
| · <b>Transport hazard class(es)</b><br>· <b>DOT</b>  |  |
|   |  |
| · <b>Class</b><br>· <b>Label</b>   | 8 Corrosive substances<br>8  |
| · <b>IMDG, IATA</b>  |  |
|   |  |
| · <b>Class</b><br>· <b>Label</b>   | 8 Corrosive substances<br>8  |
| · <b>Packing group</b><br>· <b>DOT, IMDG, IATA</b>   | III  |
| · <b>Environmental hazards:</b>  | Not applicable.  |
| · <b>Special precautions for user</b><br>· <b>Hazard identification number (Kemler code):</b><br>· <b>EMS Number:</b><br>· <b>Segregation groups</b><br>· <b>Stowage Category</b><br>· <b>Stowage Code</b> | Warning: Corrosive substances<br>80<br>F-A,S-B<br>(SGG1) Acids<br>A<br>SW2 Clear of living quarters.   |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>   | Not applicable.  |
| · <b>Transport/Additional information:</b><br>· <b>DOT</b><br>· <b>Quantity limitations</b>  | On passenger aircraft/rail: 5 L<br>On cargo aircraft only: 60 L  |

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|  |  |
|--|--|
| <ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul> | 5L<br>Code: E1<br>Maximum net quantity per inner packaging: 30 ml<br>Maximum net quantity per outer packaging: 1000 ml |
|--|--|

### \* 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

|  |                   |
|--|-------------------|
| · <b>Section 355 (Extremely hazardous substances):</b> |                   |
| CAS: 7647-01-0   | hydrochloric acid |
| CAS: 7726-95-6   | bromine           |

|  |                   |
|--|-------------------|
| · <b>Section 313 (Specific toxic chemical listings):</b> |                   |
| CAS: 7664-38-2   | phosphoric acid   |
| CAS: 7647-01-0   | hydrochloric acid |
| CAS: 7726-95-6   | bromine           |

- **TSCA (Toxic Substances Control Act):**  
 CAS 10102-25-7 is not on the TSCA Inventory listed, because it is a hydrate.  
 It is listed on the CAS 10377-48-7 number for the anhydrous form.

|                                       |
|---------------------------------------|
| All components have the value ACTIVE. |
|---------------------------------------|

|                                   |                   |
|-----------------------------------|-------------------|
| · <b>Hazardous Air Pollutants</b> |                   |
| CAS: 7647-01-0                    | hydrochloric acid |

- **Proposition 65**

|   |  |
|---|--|
| · <b>Chemicals known to cause cancer:</b> |  |
| None of the ingredients is listed.        |  |

|  |  |
|--|--|
| · <b>Chemicals known to cause reproductive toxicity for females:</b> |  |
| None of the ingredients is listed.                                   |  |

|  |  |
|--|--|
| · <b>Chemicals known to cause reproductive toxicity for males:</b> |  |
| None of the ingredients is listed.                                 |  |

|   |  |
|---|--|
| · <b>Chemicals known to cause developmental toxicity:</b> |  |
| None of the ingredients is listed.                        |  |

|   |                   |
|---|-------------------|
| · <b>New Jersey Right-to-Know List:</b> |                   |
| CAS: 7664-38-2                          | phosphoric acid   |
| CAS: 7647-01-0                          | hydrochloric acid |
| CAS: 7726-95-6                          | bromine           |

|   |                   |        |
|---|-------------------|--------|
| · <b>New Jersey Special Hazardous Substance List:</b> |                   |        |
| CAS: 7664-38-2  | phosphoric acid   | CO     |
| CAS: 7647-01-0  | hydrochloric acid | CO, R1 |
| CAS: 7726-95-6  | bromine           | CO     |

|   |                   |
|---|-------------------|
| · <b>Pennsylvania Right-to-Know List:</b> |                   |
| CAS: 7664-38-2                            | phosphoric acid   |
| CAS: 7647-01-0                            | hydrochloric acid |
| CAS: 7726-95-6                            | bromine           |

|   |                   |   |
|---|-------------------|---|
| · <b>Pennsylvania Special Hazardous Substance List:</b> |                   |   |
| CAS: 7664-38-2  | phosphoric acid   | E |
| CAS: 7647-01-0  | hydrochloric acid | E |
| CAS: 7726-95-6  | bromine           | E |

|  |  |
|--|--|
| · <b>EPA (Environmental Protection Agency)</b> |  |
| None of the ingredients is listed.             |  |

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Printing date 07/05/2022

Reviewed on 07/05/2022

Trade name: Tannin Reagent 2

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### · NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

· **Information about limitation of use:** Not required.· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### · Relevant phrases

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H330 Fatal if inhaled.

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

· **Date of preparation / last revision** 07/05/2022 / 4

### · Abbreviations and acronyms:

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

ACGIH® - American Conference of Governmental Industrial Hygienists

·A1 - Confirmed human carcinogen

·A2 - Suspected human carcinogen

·A3 - Confirmed animal carcinogen with unknown relevance to humans

·A4 - Not classifiable as a human carcinogen

·A5 - Not suspected as a human carcinogen

IARC - International Agency for Research on Cancer

·Group 1 - Carcinogenic to humans

·Group 2A - Probably carcinogenic to humans

·Group 2B - Possibly carcinogenic to humans

·Group 3 - Not classifiable as to carcinogenicity to humans

·Group 4 - Probably not carcinogenic to humans

NTP - National Toxicology Program, U.S. Department of Health and Human Services

·Group K - Known to be Human Carcinogens

·Group R - Reasonably Anticipated to be Human Carcinogens

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety &amp; Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Corrosive to Metals 1: Corrosive to metals – Category 1

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Acute Toxicity - Inhalation 2: Acute toxicity – Category 2

Skin Corrosion 1A: Skin corrosion/irritation – Category 1A

Skin Corrosion 1B: Skin corrosion/irritation – Category 1B

Skin Irritation 2: Skin corrosion/irritation – Category 2

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

### · Sources

Data arise from safety data sheets, reference works and literature.

ECHA: European Chemicals Agency <http://echa.europa.eu>

ECOTOX Database

IUCLID (International Uniform Chemical Information Database)

RTECS (Registry of Toxic Effects of Chemical Substances)

GESTIS- Stoffdatenbank (Substance Database, Germany)

· \* Data compared to the previous version altered.